APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,137	03/01/2002	Yasushi Tanaka	HYAE:134	2656

27890   7590   02/17/2009
STEPTOE & JOHNSON LLP
1330 CONNECTICUT AVENUE, N.W.
WASHINGTON, DC 20036

EXAMINER
RAO, ANAND SHASHIKANT

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
02/17/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/085,137	TANAKA ET AL.
Office Action Summary	Examiner	Art Unit	
	Andy S. Rao	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _17 November 2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-12_ is/are pending in the application.

    4a) Of the above claim(s) _1-4,7,8,10 and 11_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _5,6,9 and 12_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Request for Reconsideration

1.   Applicant's arguments filed with respect to claims 5-6, 9 and 12 on 11/12/08 have been

fully considered but they are not persuasive.

2.   Claims 5-6 and 9 remain rejected under 35 U.S.C. 103(a) as being unpatentable over

Honma et al., (hereinafter referred to as "Honma") in view of Chu, as was set forth in Office

Action of 8/19/08.

3.   Claim 12 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Honma et

al., (hereinafter referred to as "Honma") in view of Chu et al., (hereinafter referred to as "Chu")

and further in view of Kobayashi, as was set forth in the Office Action of 8/19/08.

4.   The Applicant presents three substantive arguments contending the Examiner's rejections

of claims 5-6 and 9 under 35 U.S.C. 103(a) as being unpatentable over Honma et al., (hereinafter

referred to as "Honma") in view of Chu, and of claim 12 under 35 U.S.C. 103(a) as being

unpatentable over Honma et al., (hereinafter referred to as "Honma") in view of Chu et al.,

(hereinafter referred to as "Chu") and further in view of Kobayashi, as was set forth in the Office

Action of 8/19/08. However, after a careful consideration of the arguments presented, and further

scrutiny of the applied references, the Examiner must respectfully disagree and maintain the

grounds of rejection as the currently pending claims.

        After summarizing the rationale behind the pending rejection of the claims and providing

Applicants interpretation of the applied references (Request for Reconsideration of 11/12/08:

page 2, lines 1-12; page 3, lines 1-6), the Applicants argue that since the secondary Chu

reference fails to disclose using the EOB position based control signal for both the encoding and

quantization, but only discloses using it's EOB control signal for the encoding which occurs after

quantization, the "…said EOB detector for outputting the position of the non-zero quantized

frequency component in the predetermined scanning order as a control signal to the quantizer

and the encoder…" limitation as recited is not met (Request for Reconsideration of 11/12/08:

page 2, lines 13-20; page 3, lines 7-9). The Examiner respectfully disagrees. Since Honma

already discloses both the VLC and the quantization as one unit (Honma: figure 23, elements

831-832; column 23, lines 55-65), the teaching of using the Chu EOB non-zero coefficient

position based control signal to control the encoder (Chu: 14, lines 40-65), when translated to the

Honma teaching would be applicable to both elements of its coder (i.e. the quantizer and the

Huffman coder). In particular, the Examiner notes that since Chu is concerned with

implementing an advantageous zonal pattern determination (Chu: column 13, lines 60-65) by

generation of an EOB non-zero coefficient position based detector (Chu: column 14, lines 55-60)

for reduction in processing time (Chu: column 13, lines 53-58), one of ordinary skill in the art

would note that the optimum selection of a Q-table would also benefit from the application of

Chu's zonal pattern determination (Honma: column 11, lines 20-47; column 14, lines 45-55), if

only to make sure that the optimal quantization table/matrix is selected for the high frequency

region of a block (Honma: column 16, lines 20-35). The improvement of applying Chu's EOB

non-zero coefficient position based control signal to both a quantizer and an encoder as shown in

Honma, over just an encoder as shown in Chu, which is what the claims of instant invention

recite represents a modification that the Courts have long held to unpatentable: the mundane

duplication of parts for a multiplied effect, _St. Regis Paper Co. v. Bemis Co., Inc.,_ 193 USPQ 8,

11, (7th Cir. 1977). As such, the Examiner maintains that the combination of Honma with Chu's

EOB non-zero coefficient position based control signal, does sufficiently address the "…said

EOB detector for outputting the position of the non-zero quantized frequency component in the

predetermined scanning order as a control signal to the quantizer and the encoder…" limitation

as in the claim.

Secondly, the Applicants assert that the rejection of record is improper because "…there

is no disclosure or teaching in any of these references, and no sound basis stated in this record,

that would have suggested the desirability of combining any portions thereof effectively to

anticipate or render obvious applicants' claimed invention…" (Request for Reconsideration of

11/17/08: page 3, lines 10-15). The Examiner staunchly disagrees on multiple counts. First, the

Applicants' insistence of the motivation coming from the hermetically sealed world of the

references as a basis of establishing the propriety of the rejection is in error. The Examiner notes

that the Courts concur with the Examiner's position: allowing for one of ordinary skill in the art

to start with the references as a template but incorporate the depth of knowledge of the

practitioner of art in establishing sufficient TSM (teaching, suggestion, motivation) criteria, _KSR_

International Co. v. Teleflex, Inc., _550 U.S.-, 82 USPQ2d 1385 (2007)._ Additionally, the

Examiner notes that a motivation coming from the Chu reference was used in the pending

rejection (Office Action of 11/1208: page 3, lines 13-16: reduction of processing time in coding

the coefficients), and it is unclear to this Examiner how this provided motivation can be baldly

asserted by the Applicants as not being a "sound" reason nor one of record without out any

supporting arguments to substantiate such an untenable position. Additionally, the Examiner

notes that as discussed above, there is sufficient case law that further augments the Examiner's

rationale residing at the foundation of this rejection. Accordingly, the Examiner maintains that

the proper motivation has been provided as the basis of this rejection.

  Lastly, the Applicant's argue that tertiary Kobayashi reference fails to address the

"…said EOB detector for outputting the position of the non-zero quantized frequency component

in the predetermined scanning order as a control signal to the quantizer and the encoder…"

limitation (Request for Reconsideration of 11/17/08: page 3, lines 16-20) as in the claim. In

response to applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller,* 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re*

Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In particular, the Examiner notes

that Kobayashi doesn't have to address the "…said EOB detector for outputting the position of

the non-zero quantized frequency component in the predetermined scanning order as a control

signal to the quantizer and the encoder…" limitation on its own, but addresses the feature by its

combination with the Honma-Chu combination which does address the limitation as discussed

above.

  Detailed rejections follow below.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

6.   Claim 9 is rejected under 35 U.S.C. 101 as not falling within one of four statutory

categories of inventions. Supreme Court precedent and recent Federal Circuit decisions indicate

a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as

a particular apparatus), or (2) transform underlying subject matter (such as an article or material)

to a different state or thing. While the instant claim(s) recite a series of steps or acts to be

performed, the claim(s) neither transform underlying subject matter nor positively tie to another

statutory category that accomplishes the claimed method steps, and therefore do not qualify as a

statutory process. For example there is no apparatus mentioned either in the preamble nor in the

subsequent limitations for executing the method, nor is the generation of an EOB control signal

for encoding considered "…transforming…" of the signal, _In re Bilski, 88 USPQ2d 1385 (Fed._

Cir. 2008).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   Claims 5-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma

et al., (hereinafter referred to as "Honma") in view of Chu.

        Honma discloses an encoding circuit that includes a frequency converter for frequency-

converting data of a processing target block into frequency components, a quantizer for

quantizing the frequency components, and an encoder for variable length coding the quantized

frequency components in a predetermined scanning order (Honma: figure 17A); and end of block

detector for detecting the end of an encoded block (Honma: column 21, lines 35-60), wherein

said EOB detector outputs a control signal (Honma: figure 19; column 23, lines 30-45; column

24, lines 5-20), wherein said quantizer is for quantizing the frequency components (Honma:

column 21, lines 20-25) as indicated by the control signal (Honma: column 18, lines 40-60), and

pausing the quantizing thereafter (Honma: column 24, lines 60-67; column 25, lines 1-20); and

said encoder for variable length coding the quantized frequency components as indicated by the

control signal, adding an end of block code that indicates an end of effective components, and

pauses the variable length coding thereafter (Honma: column 21, lines 60-67; column 22, lines 1-

32), as in claim 5. However, Honma fails to explicitly disclose that the EOB detector outputs the

position of the non-zero frequency component in a predetermined scanning order as a control

signal for an encoder, as in the claim. Chu discloses a video compression system utilizing a

vector adaptive transform that generates the position of the last non-zero frequency component in

a predetermined scanning order (Chu: column 13, lines 35-50) and subsequent insertion of an

EOB signal (Chu: column 14, lines 45-65) as a control signal for reducing the processing time in

processing frequency coefficients (Chu: column 13, lines 50-60). Accordingly, given this

teaching it would have obvious for one of ordinary skill in the art at the time of the invention to

incorporate the Chu teaching of generating the position of the last non-zero frequency

component in a predetermined scanning order and subsequent insertion of an EOB signal into the

Honma apparatus in order to reduce the processing time of the coding execution in the Honma

apparatus. The Honma apparatus, now incorporating the Chu disclosure of generating a signal

indicating the position of the last non-zero frequency component in a predetermined scanning

order and subsequent insertion of an EOB signal, has all of features of claim 5.

Regarding claim 6, the Honma apparatus, now incorporating the Chu disclosure of

generating a signal indicating the position of the last non-zero frequency component in a

predetermined scanning order and subsequent insertion of an EOB signal, has wherein the end of

block detector is between the frequency converter and the quantizer, and said end of block

detector comprises: a memory for temporarily retaining the frequency components of the

processing target block from the frequency converter, and outputting the retained frequency

components in the predetermined scanning order (Chu: column 45-60); a counter for detecting a

position of the frequency component that is inputted from the memory in the predetermined

scanning order (Honma: column 24, lines 1-20); a first comparator for comparing the frequency

component, using a quantization value as a divisor for dividing the frequency component in the

quantizer (Honma: column 23, lines 15-25); and a register for retaining a position of a non-zero

quantized frequency component in the predetermined scanning order based on a result of the first

comparator (Chu: column 15, lines 50-67), as in the claim.

Honma discloses an encoding method (Honma: figure 16) comprising: frequency-

converting data of a processing target block into frequency components (Honma: column 21,

lines 20-25); detecting an end of block of the frequency components by comparing the frequency

component with a quantization value as a divisor for dividing the frequency components in a

quantization process (Honma: column 21, lines 35-45), and detecting the end of an encoded

block (Honma: column 21, lines 46-60); quantizing the frequency components (Honma: column

18, lines 40-60), and pausing the quantizing thereafter (Honma: column 24, lines 60-67; column

25, lines 60-67); variable length coding the quantized frequency components (Honma: column
24, lines 5-19), adding an end of block code that indicates an end of effective components
(Honma: column 24, lines 20-30), and pausing the variable length coding thereafter (Honma:
column 24, lines 60-67; column 25, lines 1-20), as in claim 9. However, Honma fails to
explicitly disclose that the EOB detector outputs the position of the non-zero frequency
component in a predetermined scanning order as a control signal as in the claim. Chu discloses a
video compression method (Chu: column 17, lines 60-67; column 18, lines 1-18) utilizing a
vector adaptive transform that generates the position of the last non-zero frequency component in
a predetermined scanning order (Chu: column 13, lines 35-50) and subsequent insertion of an
EOB signal (Chu: column 14, lines 45-65) as a control signal for reducing the processing time in
processing frequency coefficients (Chu: column 13, lines 50-60). Accordingly, given this
teaching it would have obvious for one of ordinary skill in the art at the time of the invention to
incorporate the Chu teaching of generating the position of the last non-zero frequency
component in a predetermined scanning order and subsequent insertion of an EOB signal into the
Honma method in order to reduce the processing time of the coding execution in the Honma
apparatus. The Honma method, now incorporating the Chu disclosure of generating a signal
indicating the position of the last non-zero frequency component in a predetermined scanning
order and subsequent insertion of an EOB signal, has all of features of claim 9.

9.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honma et al.,
(hereinafter referred to as "Honma") in view of Chu et al., (hereinafter referred to as "Chu") and
further in view of Kobayashi.

Honma discloses an encoding method (Honma: figure 16) comprising: frequency-

converting data of a processing target block into frequency components (Honma: column 21,

lines 20-25); detecting an end of block of the frequency components by comparing the frequency

component with a quantization value as a divisor for dividing the frequency components in a

quantization process (Honma: column 21, lines 35-45), and detecting the end of an encoded

block (Honma: column 21, lines 46-60); quantizing the frequency components (Honma: column

18, lines 40-60), and pausing the quantizing thereafter (Honma: column 24, lines 60-67; column

25, lines 60-67); variable length coding the quantized frequency components (Honma: column

24, lines 5-19), adding an end of block code that indicates an end of effective components

(Honma: column 24, lines 20-30), and pausing the variable length coding thereafter (Honma:

column 24, lines 60-67; column 25, lines 1-20), as in claim 12. However, Honma fails to

explicitly disclose that the EOB detector outputs the position of the non-zero frequency

component in a predetermined scanning order as a control signal or the implementation of the

method as a computer program *on a computer readable medium* for making a computer

implement the method as in the claim. Chu discloses a video compression method (Chu: column

17, lines 60-67; column 18, lines 1-18) utilizing a vector adaptive transform that generates the

position of the last non-zero frequency component in a predetermined scanning order (Chu:

column 13, lines 35-50) and subsequent insertion of an EOB signal (Chu: column 14, lines 45-

65) as a control signal for reducing the processing time in processing frequency coefficients

(Chu: column 13, lines 50-60). Accordingly, given this teaching it would have obvious for one of

ordinary skill in the art at the time of the invention to incorporate the Chu teaching of generating

the position of the last non-zero frequency component in a predetermined scanning order and

subsequent insertion of an EOB signal into the Honma method in order to reduce the processing time of the coding execution in the Honma apparatus. The Honma method, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal, has a majority of features of claim 12, but still fails to disclose the implementation of the method as a computer program *on a computer readable medium* for making a computer implement the method as in the claim. Kobayashi discloses an image encoding method (Kobayashi: figures 1-6) including end of block detection/processing (Kobayashi: column 12, lines 35-50) as implemented on as a computer program on a computer readable medium (Kobayashi: column 24, lines 35-45) in order to have the method implemented across a distributed network (Kobayashi: column 26, lines 50-52). Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art to incorporate the Kobayashi teaching of having a computer program as embodied as instructions on a computer readable medium with the Honma-Chu method in order to have the Honma-Chu method implemented across distributed networks. The Honma method, now incorporating the Chu disclosure of generating a signal indicating the position of the last non-zero frequency component in a predetermined scanning order and subsequent insertion of an EOB signal and implemented as a computer program on a computer readable medium as shown by Kobayashi, has all of the features of claim 12.

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The

examiner can normally be reached on Monday-Friday 8 hours.

      If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

      Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

                                        Andy S. Rao
                                        Primary Examiner
                                        Art Unit 2621

asr
/Andy S. Rao/
Primary Examiner, Art Unit 2621
February 11, 2009.